

WHAT IS CLAIMED:

1. A method for rendering three dimensional scenes, comprising:
2. sending a request from a first computer to a second computer, wherein the request
3. identifies a three dimensional object to be rendered;
4. creating a level of detail (LOD) representation of the three dimensional object on the
5. second computer; and
6. returning the LOD representation of the three dimensional object from the second
7. computer to the first computer, thereby allowing the first computer to display an image of the
8. three dimensional object.

1. The method as recited in claim 1, further comprising:
2. distributing the three dimensional object from the first computer to the second computer;
3. and
4. associating an identifier with the three dimensional object.

1. The method as recited in claim 2, further comprising:
2. inserting the three dimensional object into a database available to the second computer;
3. and
4. displaying the LOD representation of the three dimensional object in a three dimensional
5. scene on the first computer.

1. The method as recited in claim 1, wherein the request includes a specified level of detail
2. for the three dimensional object.

1. The method as recited in claim 4, wherein the creating step includes creating a
2. progressive mesh representation of the three dimensional object with the specified level of detail
3. as contained in the request.

Sub 1 6. A method for utilizing a network of computers to render a three dimensional scene,
2 comprising:

at 3 sending a plurality of requests from a first computer to a plurality of other computers
4 over a network, wherein the requests identify three dimensional objects to be rendered;

5 on each of the plurality of other computers, creating a LOD representation of the three
6 dimensional objects received from the first computer; and

7 returning the LOD representations of the three dimensional objects from the plurality of
8 other computers to the first computer, thereby allowing the first computer to display an image of
9 the three dimensional objects.

1 7. The method as recited in claim 6, further comprising:

2 distributing the three dimensional objects from the first computer to the plurality of other
3 computer; and

4 associating identifiers with the three dimensional objects

1 8. The method as recited in claim 7, further comprising:

2 on each of the plurality of other computers, inserting the three dimensional objects into at
3 least one database accessible by each of the plurality of other computers; and

4 displaying the LOD representation of the three dimensional objects in a three dimensional
5 scene on the first computer.

Sub A2 9. The method as recited in claim 6, wherein the requests include a specified level of detail
for the three dimensional objects.

1 10. The method as recited in claim 9, wherein the creating step includes creating LOD
2 representations of the three dimensional objects with the specified level of detail as contained in
3 the requests.

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Claim 11

1 11. The method as recited in claim 6, further comprising:
2 receiving an input from a user on the first computer;
3 processing the input to determine a first three dimensional scene that corresponds with
4 the input; and

5 receiving subsequent inputs from the user and processing the inputs to determine
6 subsequent three dimensional scenes that correspond with the subsequent inputs, wherein the
7 user interactively controls the display of the subsequent three dimensional scenes by his
8 subsequent inputs.

Claim 12

1 12. A computer system for rendering a three dimensional scene, comprising:
2 a visualization console;
3 a plurality of workstations, connected to the visualization console by a network, wherein
4 the visualization console and the plurality of workstations operate together, wherein;
5 the visualization console sends a plurality of requests to the plurality of
6 workstations over the network, wherein the requests identify three dimensional objects to be
7 rendered;
8 the workstations create LOD representations of the three dimensional objects
9 received from the visualization console; and
10 the workstations return the LOD representations of the three dimensional objects
11 to the visualization console, thereby allowing the visualization console to render an image of the
12 three dimensional object.

1 13. The computer system as recited in claim 12, wherein the visualization console distributes
2 three dimensional objects to the plurality of workstations over the network, and the workstations
3 associate identifiers with the three dimensional objects.

1 14. The computer system as recited in claim 13, wherein each of the workstations inserts the
2 three dimensional objects into at least one database accessible by each of the workstations and
3 the visualization console displays the LOD representation of the three dimensional objects in a
4 three dimensional scene.

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1 15. ~~The computer system as recited in claim 12, wherein the requests include a specified~~
2 level of detail for the three dimensional objects.

16. The computer system as recited in claim 15, wherein the workstations create LOD
representations of the three dimensional objects with the specified level of detail as contained in
the requests.

17. A computer system for rendering a three dimensional scene, comprising:
a visualization console;
a plurality of workstations, connected to the visualization console by a network;
means for sending a plurality of requests to the plurality of workstations over the
network, wherein the requests identify three dimensional objects to be rendered;
means for creating a LOD representation of the three dimensional objects received from
the visualization console; and
means for returning the LOD representations of the three dimensional objects to the
visualization console, thereby allowing the visualization console to display an image of the three
dimensional object.

~~18. The computer system as recited in claim 17, further comprising:
2 means for distributing three dimensional objects to the plurality of workstations over the
3 network; and
4 means for associating associate identifiers with the three dimensional objects.~~

1 19. The computer system as recited in claim 18, further comprising:
2 means for inserting the three dimensional objects into databases accessible by each of the
3 workstations; and
4 means for displaying the LOD representation of the three dimensional objects in a three
5 dimensional scene.

Sub A5
1 20. ~~The computer system as recited in claim 17, wherein the requests include a specified level of detail for the three dimensional objects.~~

1 21. The computer system as recited in claim 20, further comprising:
2 means for creating LOD representations of the three dimensional objects with the
3 specified level of detail as contained in the requests on the workstations.

Sub A6
1 22. ~~The method as recited in claim 17, further comprising:~~
2 means for receiving an input from a user on the first computer;
3 means for processing the input to determine a first three dimensional scene that
4 corresponds with the input; and
5 means for receiving subsequent inputs from the user and processing the inputs to
6 determine subsequent three dimensional scenes that correspond with the subsequent inputs,
7 wherein the user interactively controls the display of the subsequent three dimensional scenes by
8 his subsequent inputs.

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